



The Water We Drink
Town of Blacksburg, Virginia
May 22, 2003

We are pleased to report that our drinking water is safe and meets federal and state requirements.

Introduction

We're very pleased to provide you with the Annual Water Quality Report for the calendar year 2002. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. We purchase our water from the Blacksburg Christiansburg VPI Water Authority that utilizes treated surface water from the New River in Montgomery County as its water source. The Water Treatment Facility is considered to be a "Conventional" treatment process. The water taken from the New River is first chlorinated and then it goes through several treatment processes including coagulation, flocculation, sedimentation, and filtration. The quality of your drinking water must meet state and federal requirements administered by the Virginia Department of Health (VDH).

If you have any questions about this report or concerning your water utility, please contact Mr. Randy Formica, Town Engineer, Town of Blacksburg at 961-1126. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled Water Authority meetings. They are held on every third Wednesday of the month at 4:00 p. m. at the Water Treatment Plant at 3355 Peppers Ferry Road. You may also find information on the water system on the Blacksburg Christiansburg VPI Water Authority web page at www.h2o4u.org. Anyone interested in scheduling a tour of the water plant may contact Mr. Gerard W. Higgins, Superintendent-Manager, at 639-2575.

General Information

The sources of drinking water (both tap water and bottled water) include rivers, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: (1) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. (2) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. (3) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses. (4) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can come from gas stations, urban stormwater runoff, and septic systems. (5) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Water from surface sources is treated to make it drinkable while groundwater may or may not have any treatment. Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. More information can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

A source water assessment of our system was conducted in 2002 by Draper Aden and Associates. The source was determined to be of high susceptibility to contamination using criteria developed by the state and its approved source water assessment program. Information from this report may be obtained from the Water Authority by contacting Mr. Higgins at the above listed phone number.

Water at the plant is tested at least 249 times a day, 7,757 times a month, and 93,602 times a year. The Blacksburg Christiansburg VPI Water Authority routinely monitors for 76 regulated 48 unregulated, and many nonregulated contaminants in your drinking water according to Federal and State regulations. Any contaminants not listed in the table were not detected in the treated water. This table shows the results of our monitoring for the period of January 1st to December 31st, 2002.

TEST RESULTS						
Regulated Contaminants						
Contaminant	In Compliance Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely Source of Contamination
Microbiological Contaminants						
1.Turbidity*	Y	0.11* 100%	NTU	n/a	TT, 1 NTU max TT, ≤ 0.3 (95% of the time)	Soil runoff
2. Total Organic Carbon	Y	1.09 Range- 1.0to1.19	n/a	n/a	TT, met when ≥ 1	Naturally present in the environment
Radioactive Contaminants						
3. Alpha emitters	Y	0.7	pci/1	0	15	Erosion of natural deposits
4. Beta/photon emitters	Y	2.0	mrem/yr	0	4	Decay of natural and man-made deposits
Inorganic Contaminants						
5. Copper (Test results are from the 2002 round of testing)	Y	90 th percentile = 0.082 and # of sites above Action Level=0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
7.Fluoride	Y	0.63	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
8.Nitrate	Y	0.88	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Volatile Organic Contaminants						
9.Chlorite	Y	0.02	ppm	0.8	1	By-product of drinking water, chlorination
10. Chlorine dioxide	Y	0.03	ppb	MRDLG =800	MRDL= 800	Water additive used to control microbes
11. Chlorine	Y	1.02 Range .04 to 2.2	ppm	MRDLG = 4	MRDL= 4	Water additive used to control microbes
12. HAA (Haloacetic Acids)	Y	52 Range 33 to 112	ppb	n/a	60	By-product of drinking water disinfection
13. TTHMs (Total trihalomethanes)	Y	65 Range 31 to 133	ppb	n/a	100/80	By-product of drinking water chlorination

*Turbidity is a measure of the clarity of the water. EPA requires that we report to you the highest single turbidity result measured during the 2002 year. Out of approximately 20,000 tests the highest measurement was 0.11 turbidity units and the monthly percentage of samples meeting the requirements was 100%, every month in 2002.

Approximately 60 bacteriological samples were performed each month during the past year with all tests resulting in non-detects for bacteria.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

- Non-Detects (ND)* - laboratory analysis indicates that the constituent is not present.
- Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.
- Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.
- Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- Action Level (AL)* - the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.
- Treatment Technique (TT)* - a required process intended to reduce the level of a contaminant in drinking water.
- Maximum Contaminant Level or MCL* means the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
- Maximum Contaminant Level Goal or MCLG* means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG 's allow for a margin of safety.
- Milirems per year(mrem/yr)*-A measure of radiation absorbed by the body.
- Maximum Residual Disinfectant Level Goal or MRDLG* – the level of drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- Maximum Residual Disinfectant Level or MRDL*– the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

As you can see by the table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

Lead in drinking water is rarely the sole cause of lead poisoning, but it can add to a person's total lead exposure. All potential sources of lead in the household should be identified and removed, replaced or reduced. Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Cryptosporidium (crypto) is a microbial parasite found in surface water throughout the U.S. Although filtration removes cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Although we are not required to test for cryptosporidium, we nevertheless decided it was prudent to do so. Monitoring of source water has indicated the presence of these organisms. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791). Please call our office if you have questions.

The Town of Blacksburg and the Water Authority work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.